

OCEAN GALES AND STORMS, FEBRUARY 1940—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began February	Time of lowest barometer	Gale ended February	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH PACIFIC OCEAN—Con.													
Mauna Ala, Am. S. S.	Seattle	Honolulu	27 49 N.	151 41 W.	26	4p, 25	27	1,001.7	W	W, 5	N	WNW, 9	SW-W.
Arizonan, Am. S. S.	Los Angeles	Balboa	15 30 N.	96 36 W.	25	5p, 25	26	1,013.9	NE	W, 3	NW	N, 8	SW-WSW.
Makaweli, Am. S. S.	San Francisco	Honolulu	28 24 N.	145 35 W.	26	4p, 26	27	1,000.0	WSW	WSW, 7	WSW	W, 8	SW-W.
President Adams, Am. S. S.	do	do	28 54 N.	144 42 W.	26	4p, 26	27	1,000.7	SW	SW, 8	WNW	W, 9	
Nordbo, Dan. M. S.	Osaka	San Francisco	36 36 N.	148 42 W.	27	4a, 27	27	989.8	W	W, 7	WNW	WNW, 9	W-WNW.
Huguenot, Am. S. S.	Los Angeles	Seattle	43 27 N.	125 06 W.	27	6a, 27	27	992.9	S	SW, 10	W	SW, 10	S-W.
Lexa Maersk, Dan. M. S.	Yokohama	Los Angeles	41 01 N.	156 07 E.	26	12m, 27	28	980.7	NW	WNW, 10	NW	WNW, 10	
Sirius, U. S. S.	Alameda, Calif.	Pearl Harbor, T. H.	35 30 N.	127 24 W.	27	3p, 27	28	1,002.7	S	S, 8	S	S, 8	
Taranger, Nor. M. S.	Kobe	Portland, Oreg.	45 07 N.	134 06 W.	27	12m, 27	27	968.7	ENE	NE, 3	NE	NE, 11	NE-WSW.
Illinois, Am. S. S.	Osaka	do	48 02 N.	135 17 W.	27	6a, 28	28	976.0	NE	NE, 8	NNW	NE, 8	NE-N.
Kalmoku, Am. S. S.	Portland, Oreg.	Honolulu	44 31 N.	128 40 W.	28	12m, 28	28	964.4	SE	SSE, 9	SW	S, 10	SSE-S.

¹ Position approximate.

NORTH PACIFIC OCEAN, FEBRUARY 1940

By WILLIS E. HURD

Atmospheric pressure.—A great low-pressure area lay over most of the northern part of the ocean, broken by only a few days of intruding anticyclonic conditions. The average center of the Aleutian Low lay near Dutch Harbor, where the month's pressure, 994.3 millibars (29.36 inches), was 8.1 millibars (0.24 inch) below the February normal. Subnormal pressures occurred elsewhere throughout middle and northern latitudes.

In lower latitudes of the Far East pressures were for the most part above normal, with the continental anticyclone extending eastward across the island groups between the Philippines and Japan. A shallow anticyclone, much less than normal in extent, lay between California and the Hawaiian Islands.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, February 1940, at selected stations

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Millibars	Millibars	Millibars		Millibars	
Point Barrow	1,025.3	+5.3	1,050	22	999	29
Dutch Harbor	994.3	-8.1	1,010	15	971	29
St. Paul	1,000.2	-3.9	1,018	15	977	29
Kodiak	1,002.2	-9	1,033	21	976	12
Juneau	1,010.2	-3.0	1,037	20	988	8
Tatoosh Island	1,010.2	-5.7	1,032	20	990	26
San Francisco	1,017.6	-1.7	1,027	29	1,006	28
Mazatlan	1,013.5	0	1,017	9	1,010	14
Honolulu	1,015.2	-2.4	1,020	27	1,010	21
Midway Island	1,014.8	-8	1,023	14, 26	1,003	29
Guam	1,012.8	-1	1,016	11-14	1,008	23
Manila	1,014.4	+2.2	1,018	9, 14	1,012	2, 6, 28-29
Hong Kong	1,017.0	-0.6	1,025	15	1,011	28
Naha	1,020.5	+2.9	1,026	15	1,012	1
Titijima	1,019.4	+4.2	1,029	15	1,009	7
Petropavlovsk ¹	1,004.3	-8	1,023	2	978	22

¹ For 18 days.

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco, and Honolulu, which are based on 2 observations. Departures are computed from best available normals related to time of observation.

Extratropical cyclones and gales.—The month opened with a cyclone of almost ocean-wide extent in northern and middle latitudes, accompanied by scattered gales of force 8 to 10 on the 1st to 4th between Midway Island and the Aleutians, and to the northeastward of the Hawaiian Islands. Thereafter numerous smaller, but in some instances more violent, cyclones continued until the end of February.

Considerably more than half of the storminess reported occurred between latitudes 35° and 45° N. An unusually small number of gale winds for the month was reported from the northernmost steamer route. In southeastern waters gales of force 8 to 9 occurred on 8 days, concentrated largely between about latitudes 25° and 36° N., longitudes 135° and 155° W.

In coastal waters of the United States there were whole southerly gales (force 10) on several days, caused by storms central for the most part at some distance oceanward. Ships encountered the greater number of these gales on the 5th, 6th, 12th, 27th, and 28th, off the coasts of Oregon and northern California. Some 10° west of the Oregon coast, near 45° N., 134° W., the Norwegian motorship *Taranger* experienced the strongest gale of the month on the eastern half of the Pacific. It was of force 11 from the northeast on the 27th, lowest barometer 968.8 millibars (28.61 inches).

In central and western waters of the ocean gales of force 11 to 12 occurred on the 5th and 15th near 40° N., 150°–155° E.; on the 9th near 39° N., 171° E.; and on the 20th near 43° N., 179° W. That of the 20th was of hurricane force from the east, encountered by the motorship *Taranger*. The ship's lowest barometer was 964.8 millibars (28.49 inches), which was the lowest reading of the month.

Gales of low latitudes.—These winds, so far as known, were confined to the west coasts of Mexico and lower Central America. During the night of the 17th–18th the prevailing northwesterly wind south of Cape Corrientes rose to force 7. In the Gulf of Tehuantepec northerly gales of force 8 occurred on the 18th, 22d, and 26th; and of force 9, on the 21st and 25th. Off the coast of Costa Rica there was a papagayo of force 9 from north-northeast on the 23d.

Fog.—Scattered fogs occurred over a wide extent of the ocean in west longitudes: Near the eastern Aleutians on the 7th to 9th; in and near the Gulf of Alaska on the 1st to 3d and the 11th; a day or two out from California on six dates; off the California coast on 6 days; off Lower California on 3 days; off Mexico on 4 days; and south of Panama on 2 days.